

Surname	Centre Number	Candidate Number
First name(s)		0



GCSE



S25-3420U30-1A

MONDAY, 6 JANUARY – FRIDAY, 21 FEBRUARY 2025

PHYSICS – Unit 3 (3420U30)

PRACTICAL ASSESSMENT

INVESTIGATING THE RESISTANCE OF A LIGHT DEPENDENT RESISTOR

SECTION A

1 hour

For Examiner's use only		
	Maximum Mark	Mark Awarded
Section A	6	

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01

ADDITIONAL MATERIALS

A calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The total number of marks available for this section of the task is 6.

The number of marks is given in brackets at the end of each question or part-question.

This task is in 2 sections, **A** and **B**. You will complete Section **A** in one lesson and Section **B** in the next science lesson.



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Introduction

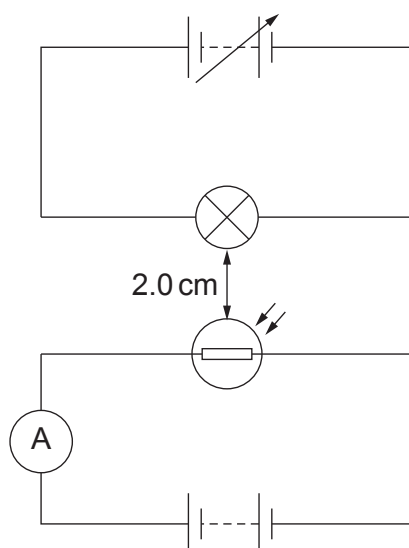
Your task is to investigate the effect of light intensity on the resistance of a light dependent resistor (LDR).

Apparatus Required

The following apparatus is required for each group: (each group should consist of no more than three candidates).

- 1 × power supply (set to 12 V for LDR)
- 1 × variable power supply (0–12 V for lamp)
- 1 × LDR
- 1 × clamp and stand
- 1 × ammeter
- 1 × 12 V, 24 W filament lamp

Diagram



Read the method and answer question 1.(a) before carrying out the experiment and recording your results.

Method

1. The circuits in the diagram have been set up for you. The LDR is positioned 2.0 cm away from the lamp. They must remain at this distance throughout the experiment.
2. Set the voltage across the lamp to 4 V.
3. Use the ammeter to measure and record the current.
4. Repeat steps 2–3 for voltages across the lamp of 6 V, 8 V, 10 V and 12 V.
5. Repeat steps 2–4 to obtain a total of two sets of results.



SECTION AAnswer **all** questions.

1. (a) Complete the risk assessment for this experiment.
There is no risk of electric shock in this experiment.

[2]

HAZARD	RISK	CONTROL MEASURE

You may record raw results in the space below.



(b) Present your results in a table. Include all of your results.

[4]

Examiner
only

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